1. (Amended) An electromagnetic transponder including a parallel oscillating circuit adapted to being excited by a series oscillating circuit of a read/write terminal when the electromagnetic transponder enters an electromagnetic field of the read/write terminal, wherein components of the parallel oscillating circuit of the electromagnetic transponder are sized so that a coupling coefficient between respective oscillating circuits of the terminal and of the electromagnetic transponder rapidly decreases when a distance separating the electromagnetic transponder from the terminal becomes smaller than a predetermined value.

Sub C1 A1

2. (Amended) The electromagnetic transponder of claim 1, wherein said predetermined value is 5 cm.

4. (Amended) The electromagnetic transponder of claim 1, wherein an inductance of the parallel oscillating circuit is chosen in accordance with the following relation:

Sub C1

$$kopt = \sqrt{\frac{R1L2}{R2L1}},$$

where kopt represents the coupling coefficient providing a maximum voltage across the parallel oscillating circuit, where R1 represents a series resistance of the series oscillating circuit, where R2 represents an equivalent resistance of the transponder brought in parallel on inductance L2, and where L1 represents an inductance of the series oscillating circuit.

A2

5. (Amended) The electromagnetic transponder of claim 1, having a parallel oscillating circuit wherein components are sized based on an operating point at a median distance of a desired operating range, chosen to correspond to a coupling coefficient as close as possible to an optimal coupling coefficient in accordance with the following relation:

$$V2max(kopt) = \sqrt{\frac{R2}{R1}}\frac{Vg}{2},$$

where V2max is a voltage across the parallel oscillating circuit for optimal coupling between the oscillating circuits, R1 is a series resistance of the series oscillating circuit, R2 is an

equivalent resistance of the transponder brought in parallel on its oscillating circuit, and Vg is an excitation voltage of the series oscillating circuit.

6. (Amended) The electromagnetic transponder of claim 1, wherein a number of turns of an inductance of the parallel oscillating circuit is smaller than 3.

7. (Amended) The electromagnetic transponder of claim 1, wherein respective values of a capacitance and of an inductance of the parallel oscillating circuit range is between 20 and 500 pf and between 0.1 and 10 μH.

A2

8. (Amended) A terminal for generating an electromagnetic field adapted to cooperate with at least one transponder when said at least one transponder enters the electromagnetic field, including a series oscillating circuit for generating the electromagnetic field, the series oscillating circuit being sized so that a coupling coefficient between respective oscillating circuits of the terminal and of the at least one transponder strongly decreases when a distance separating the at least one transponder from the terminal becomes smaller than a predetermined value.

9. (Amended) The terminal of claim 8, wherein components of the series oscillating circuit are sized to fulfill operating conditions of the transponder of claim 1.

10. (Amended) The terminal of claim 9, wherein an inductance of the series oscillating circuit includes between 3 and 15 turns.

REMARKS

In response to the Office Action mailed December 4, 2002, Applicants submit the following amendments and remarks and respectfully request reconsideration. Claims 1-12 are pending in this application, of which claims 1 and 8 are independent claims. Applicants have made clarifying amendments to claims 1, 2 and 4-10 to correct minor informalities and to improve the readability of these claims. No claims are added or cancelled by this amendment.